WHAT IS CLAIMED IS:

1. A bottom-gate thin-film transistor comprising a gate electrode, a gate insulating film, an active layer, and a protective insulating film deposited in that order on a substrate,

wherein the protective insulating film has a thickness of 100 nm or less, and the protective insulating film is formed on any one of the active layer, an LDD region, and a source-drain region.

2. A bottom-gate thin-film transistor according to Claim 1, wherein the active layer comprises a polysilicon film.

3. A bottom-gate thin-film transistor according to either Claim 1 or 2, wherein the protective insulating film has a thickness of 5 to 50 nm.

4. A method for making a bottom-gate thin-film transistor comprising:

a step (1) of forming a gate electrode on a substrate;

a step (2) of forming a gate insulating film on the gate electrode;

a step (3) of forming a laminate comprising a precursor

film for an active layer, and a protective insulating film on the gate insulating film, the protective insulating film having a thickness of 100 nm or less;

a step (4) of implanting a dopant in an LDD region or a source-drain region of the precursor film for the active layer through the protective insulating film; and

a step (5) of activating the implanted dopant so that a non-doped portion constitutes the active layer.

5. A method for making a bottom-gate thin-film transistor according to Claim 4, wherein the active layer comprises a polysilicon film.

6. A method for making a bottom-gate thin-film transistor according to Claim 5, wherein, in the step (3), an amorphous silicon film is formed on the gate insulating film, the amorphous silicon film is crystallized to form the polysilicon film, and the protective insulating film is formed on the polysilicon film.

7. A method for making a bottom-gate thin-film transistor according to Claim 5, wherein, in the step (3), an amorphous silicon film is formed on the gate insulating film, the protective insulating film is continuously formed on the amorphous silicon film, and then the amorphous

silicon film is crystallized to form the polysilicon film.

8. A method for making a bottom-gate thin-film transistor according to Claim 5, wherein, in the step (3), an amorphous silicon film is formed on the gate insulating film, the protective insulating film is formed on the surface of the amorphous silicon film by surface oxidation of the amorphous silicon film, and then the amorphous silicon film is crystallized to form the polysilicon film.

9. A method for making a bottom-gate thin-film transistor according to any one of Claims 4 to 8, wherein, subsequent to the step (4), defects formed in the protective insulating film are recovered.

10. A liquid crystal display device comprising:

a TFT substrate comprising an interlayer insulating film, a transparent electrode, and an alignment layer formed on a protective insulating film of a bottom-gate thin-film transistor according to any one of Claims 1 to 3;

a counter substrate provided with a counter electrode; and

a liquid crystal interposed between the TFT substrate and the counter substrate.

Sub A3

11. A method for fabricating a liquid crystal display device comprising the steps of:

making a bottom-gate thin-film transistor by a method according to any one of Claims 4 to 9;

forming an interlayer insulating film, a transparent electrode, and an alignment layer on a protective insulating film of the bottom-gate thin-film transistor to constitute a TFT substrate; and

interposing a liquid crystal between the TFT substrate and a counter substrate provided with a counter electrode.

12. An organic EL device comprising:

a bottom-gate thin-film transistor according to any one of Claims 1 to 3; and

an organic EL element driven by the bottom-gate thin-film transistor.

Sub A4

13. A method for fabricating an organic EL device comprising the steps of:

making a bottom-gate thin-film transistor by a method according to any one of Claims 4 to 9;

forming an interlayer insulating film on a protective insulating film of the bottom-gate thin-film transistor; and

forming an organic EL element driven by the bottom-gate thin-film transistor on the interlayer insulating film.

Add A5